IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A target ~~intended to emit~~ for emitting neutrons when bombarded with particles, comprising:

a plurality of neutron emissive parts being formed of a hydrogen fixing material within which hydrogen and anthropogenic tritium nuclei are fixed, the neutron emissive parts being configured to emit neutrons when subject to bombardment with particles; and

a plurality of neutron non-emissive parts which are juxtaposed to the neutron emissive parts and which not being fixed with hydrogen and anthropogenic tritium nuclei, the neutron non-emissive parts not being configured to emit neutrons when subject to bombardment with particles,

wherein ~~only the neutron emissive parts containing anthropogenic tritium emitting neutrons during the bombardment with particles,~~ said plurality of neutron emissive ~~and non-emissive~~ parts ~~being~~ are arranged in relation to the neutron non-emissive parts in the formation of ~~so as to form~~ a non-uniform pattern as a coded mask ~~such that said target emits~~ and are collectively configured to emit a neutron flow including plural neutron beams coded by the pattern of the mask when subject to bombardment with particles.

Claim 2 (Currently Amended): The target according to claim 1, wherein the emissive parts are formed from at least one metal hydride ~~in which tritium nuclei are fixed~~, the metal of the metal hydride being deposited on a support in non-hydrogen fixing material through a stencil.

Claim 3 (Withdrawn): The target according to claim 1, further comprising:

an extended neutron emissive zone formed from at least one metal hydride, said extended zone cooperating with a mask in neutron non-emissive material, the non-emissive material of the mask partially covering up the extended emissive zone vis-à-vis the particles and forming non-emissive parts.

Claim 4 (Withdrawn): The target according to claim 3, wherein the extended emissive zone is supported by a support in a non-hydrogen fixing material.

Claim 5 (Previously Presented): The target according to claim 2, wherein the non-hydrogen fixing material of the support is chosen from among copper, silver or gold, said metals being used alone or in combination.

Claim 6 (Withdrawn): The target according to claim 2, wherein the metal hydride is chosen from the group consisting of titanium hydride, zirconium hydride, erbium hydride, scandium hydride and vanadium hydride.

Claim 7 (Withdrawn): The target according to claim 3, wherein the non-emissive material of the mask is chosen from among molybdenum, steel, iron, copper, tungsten and tantalum, said metals being used alone or in combination.

Claim 8 (Previously Presented): A particle accelerator, comprising a target according to claim 1.

Claim 9 (Cancelled).

Claim 10 (Previously Presented): The particle accelerator according to claim 8, wherein the particle accelerator is equipped with an α particle detector associated with the emission of neutrons.

Claim 11 (Previously Presented): The particle accelerator according to claim 10, wherein the α particle detector comprises a plurality of pixels arranged in a matrix.

Claim 12 (Previously Presented): The particle accelerator according to claim 10, wherein the target is inclined in relation to the direction of the particles that are bombarding it.

Claim 13 (Previously Presented): The particle accelerator according to claim 10, wherein the target is substantially parallel to the α particle detector.

Claims 14-15 (Cancelled).

Claim 16 (Previously Presented): A neutron generating tube, comprising a target according to claim 1.

Claim 17 (Cancelled).

Claim 18 (Previously Presented): The neutron generating tube according to claim 16, wherein the neutron generating tube is equipped with an α particle detector associated with the emission of neutrons.

Claim 19 (Previously Presented): The neutron generating tube according to claim 18, wherein the α particle detector comprises a plurality of pixels arranged in a matrix.

Claim 20 (Previously Presented): The neutron generating tube according to claim 18, wherein the target is inclined in relation to the direction of the particles that are bombarding it.

Claim 21 (Previously Presented): The neutron generating tube according to claim 18, wherein the target is substantially parallel to the α particle detector.

Claims 22-23 (Cancelled).

Claim 24 (New): A system comprising:

a particle accelerator which includes an ion source and a target, the target comprising:

a plurality of neutron emissive parts being formed of a hydrogen fixing material within which hydrogen and anthropogenic tritium nuclei are fixed, the neutron emissive parts being configured to emit neutrons when subject to bombardment with particles; and

a plurality of neutron non-emissive parts which are juxtaposed to the neutron emissive parts and not being fixed with hydrogen and anthropogenic tritium nuclei, and which do not emit neutrons when subject to bombardment with particles,

wherein said plurality of neutron emissive parts being arranged in relation to the neutron non-emissive parts so as to form a non-uniform pattern as a coded mask and are collectively configured to emit a neutron flow including plural neutron beams coded by the pattern of the mask when subject to bombardment with particles;

an image plane; and

an object located between the particle accelerator and the image plane,

wherein the ion source is configured to bombard the target with particles and the plurality of neutron emissive parts of the target are configured emit the neutron flow, in response to being bombarded with the particles, through a point on the object and onto the image plane.